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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,538	03/31/2004	Akihiro Okubo	06920/0201117-US0	9992

7278 7590 10/06/2006

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EXAMINER

LE, HOA T

ART UNIT

PAPER NUMBER

1773

DATE MAILED: 10/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/816,538	OKUBO ET AL.	
	Examiner	Art Unit	
	Hoa T. Le	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,6 and 8-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,6 and 8-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Upon reconsideration, the indicated allowability in the last office action is withdrawn. New grounds of rejections follow.

Claim Rejections - 35 USC § 102

3. Claims 1-3, 6 and 8-17 are rejected under 35 U.S.C. 102(b) as being anticipated by the JP'750 patent. (JP 55-094,750).*

Claims 1-3 and 17: The JP'750 patent teaches a molding sand being coated with a thermosetting resin and a thermoplastic resin in that order. The thermoplastic resin is heated and thus partially removed to intersperse and disperse on the core. See abstract. No discussion as to the time of the heat-decomposition step, but the thermoplastic resin was taught to be acrylic resin which is among the resins recited in the instant claims; therefore, the coated molding sand taught in the JP'750 patent is necessarily subject to the same heating time and temperature as claimed.

Claims 9-10: Thermosetting resin is the same as claimed and thus inherently possesses the same softening point as claimed.

Claim 12: Considered met by inference.

Claim Rejections - 35 USC § 103

* See the translation included with this office action.

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4. Claims 6, 8, 11 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the JP'750 patent. (JP 55-094,750) as applied to claims 1-3, 6, and 8-17 above, and further in view of the discussion below.

Claims 6 and 11: It would have been obvious to arrive at the proportion of components as claimed via routine experimentation.

Claim 8: It would have been obvious as a matter of choice or by routine experimentation to arrive at the particle size of the core as claimed.

Claims 13-16: Silane coupling agent is routinely used in the art to improve the surface bonding between sand core and a resin coating. Inorganic fillers are routinely used in the art to reinforce resin-coated sand. Other additives (e.g. calcium stearate) are also known. See for example, JP patent JP 08-010,896

Examiner's Notes

5. The JP'896 patent (JP 08-010,896) teaches resin-coated sand where the resin coating comprises a thermosetting and thermoplastic resin. However, the coated sand is subject to heating temperature under 200°C, and there is no teaching of removing thermoplastic coating is suggested. Therefore, the product formed from the process taught in the JP'986 patent does not have the same structure as the claimed product.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoa T. Le whose telephone number is 571-272-1511.

The examiner can normally be reached on 10:00 am to 6:30 pm, Monday-Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

September 8, 2006



H. Thiele

Primary Examiner

AU 1773